

Summary by J. Walker of the January 26, 2017 Conference Call between Excelsior, ADEQ, EPA, and Jim Walker/Cadmus

I participated in a conference call from 10 am to 11 am on 1/26/17 with Excelsior, ADEQ, and Nancy Rumrill. The call was primarily for the benefit of ADEQ, but EPA and I were invited to participate in the first part of the call in order to gain more information on the Excelsior plan and proposed locations for the intermediate monitoring wells, especially in the early years of the ISR operation.

Excelsior presented geological cross sections and test well data that support the assumption of equivalent porous media and good hydraulic connection across the several faults that intersect the orebody.

Excelsior presented a map of the wellfield with a total of 23 monitoring wells surrounding the active mine block planned for the first year of ISR operations plus two new wellbores to be drilled for collection of additional geological data. The monitoring wells will be created by conversion of existing test wells and boreholes. Water levels and electrical conductivity will be measured and recorded in the monitoring wells for early detection of lack of containment of ISR fluids to the active mine block.

Alert levels will be established and if exceeded in the monitoring wells, pumping and/or injection rates will be adjusted to restore containment of ISR fluids within the mine block. As the wellfield expands, intermediate monitoring wells within the expanded wellfield will be plugged and replaced by other existing test wells or boreholes located beyond the active mine blocks. Excelsior will provide a plan and schedule for intermediate monitoring well development.

This appears to an acceptable plan for maintaining hydraulic control and containment of ISR fluids during ISR operations. However, we will need to review the Excelsior written responses to related EPA comments on Excelsior responses to the October 2016 RFI before confirming acceptance of the plan.